

# **Massive Hemorrhage Protocol Cheat Sheet for Nursing Staff**

Leaders in Laboratory Medicine

- 1. Activate the MHP.
  - Assign one staff member to the be a clinical contact with TM, record the name of the TM contact.
- 2. Clinical team calls Transfusion Medicine (TM) and provide:
  - Patient's name/alias, pMRN, age, weight, gender & location
  - Indication
  - Name of most responsible heath practitioner MRHP
  - Name and phone number of the clinical contact.
- Arrange for porter or designate to go to the TM lab with a completed downtime pick-up slip (or equivalent) for pick up and deliver MHP kit as applicable per site process.

- Ensure IV access
- Keep core body temp greater than 36°C
- MHP kit stays with patient if transferred (if not past the return time)
- Do NOT combine or add other blood components to a kit
- Notify TM Lab if:
  - Patient location changes
  - When MHP stopped
- Return unused blood components and products ASAP

MHP Kit Delivery Sequence						
	Patient weight 10 kg or less	Patient weight 10.1 – 25 kg	Patient weight Greater than 25 kg			
Kit #1	<ul> <li>RBC: 2 units</li> <li>Plasma: 2 units*</li> <li>Fibrinogen concentrate: 1g</li> <li>Platelets: Per TM MD**</li> </ul>	<ul> <li>RBC: 2 units</li> <li>Plasma: 2 units*</li> <li>Fibrinogen concentrate: 2g</li> <li>Platelets: Per TM MD**</li> </ul>	<ul> <li>RBC: 4 units</li> <li>Plasma: 2 - 4 units</li> <li>(2 x low titre A or AB plasma if unmatched)*</li> <li>Fibrinogen concentrate: 4g***</li> <li>Platelets: Per TM MD**</li> </ul>			
Kit #2	<ul> <li>RBC: 2 units</li> <li>Plasma: 2 units</li> <li>Fibrinogen concentrate: Per TM MD</li> <li>Platelets: 1 unit</li> </ul>	RBC: 2 units Plasma: 2 units Fibrinogen concentrate: Per TM MD Platelets: 1 unit	<ul> <li>RBC: 4 units</li> <li>Plasma: 2 - 4 units</li> <li>(2 x low titre A or AB plasma if unmatched)</li> <li>Fibrinogen concentrate: Per TM MD ***</li> <li>Platelets: 1 unit</li> </ul>			
Kit #3+ (per TM MD)	RBC: 2 units Plasma: 2 units Fibrinogen concentrate: Per TM MD Platelets: Per TM MD	<ul> <li>RBC: 2 units</li> <li>Plasma: 2 units</li> <li>Fibrinogen concentrate: Per TM MD</li> <li>Platelets: Per TM MD</li> </ul>	<ul> <li>RBC: 4 units</li> <li>Plasma: 2 - 4 units (2 x low titre A or AB plasma if unmatched)</li> <li>Fibrinogen concentrate: Per TM MD</li> <li>Platelets: Per TM MD</li> </ul>			

**Note:** All kit contents can be modified at the discretion of the TM physician.

<sup>\*</sup> Plasma may be issued separately as soon as available, if it cannot be provided within the kit.

<sup>\*\*</sup> Cardiovascular and Vascular MHP activations receive platelets in Kit #1 instead of Kit #2.

<sup>\*\*\*</sup>Obstetrical MHP activations should receive 4q Fibrinogen concentrate in Kit #1 and #2.



# Massive Hemorrhage Protocol Cheat Sheet for Nursing Staff

Leaders in Laboratory Medicine

Product	Approximate Volume	Administration
Red Blood Cells	300 mL	Administer through blood tubing or high flow tubing for
Plasma	100- 280 mL	<ul> <li>pressure infuser</li> <li>Ensure pressure infuser DOES NOT exceed 300 mmHg</li> </ul>
Platelets	180-270 mL	Can transfuse via blood warmer
Fibrinogen	1g/vial	Separate line infusion over 20mL/min

Refer to the <u>Blood Components and Products Information/Monographs</u> on the <u>AHS Transfusion Medicine website</u>.

 Collect and send blood work STAT throughout MHP duration. Refer to Connect Care MHP resources. ABG and other POCT testing (e.g. ROTEM, TEG) per MRHP.

Test	Comments	Frequency	
Type and Screen	Must use TSIN form	If needed	
<ul><li>MHP Hemoglobin</li><li>MHP Platelet</li></ul>	Only <b>one</b> tube needed		
<ul><li>MHP PT (INR)</li><li>MHP Fibrinogen</li></ul>	One <u>full</u> tube needed	At activation & then q30 min	
Electrolytes		At activation and q1h	
Creatinine		Once at activation	
<ul><li>Lactate</li><li>Calcium</li></ul>	Not required if part of ABG	Once (as needed)	

### 5. Communicate:

- Notify TM Lab and the porter or designate (if applicable) if the patient **location** changes.
- MRHP or designate to contact TM physician if Kit #2 is needed, or modifications to any Kit contents.

#### 6. Terminate:

- Notify TM lab to terminate MHP if no longer required.
- Return unused blood components and products to the TM lab ASAP. (Fibrinogen concentrate can be returned to the TM lab as long as it has not been reconstituted).
- 7. Feedback: Provide feedback.

### Notes for blood components and products:

- Keep unused blood components in their original kit. DO NOT combine or add other blood components to a kit.
- When MHP is terminated or if patient is transported .Complete the appropriate section on For Clinical Use Only Transport Container Slip. Return kit to the TM lab by the indicated date and time.

For Clinical Use Only						
Were units removed from kit but not transfused?						
1	□Yes □No					
If Yes, were units immediately put back in kit?						
1	□Yes □No					
If No, how long were units out?						
Returned to kit by:(name			(name)			
Complete belo	Complete below if kit is transported with patient					
From PCU:		To PCU:				
# RBC units:						
# Plasma units:						
# Platelet units:						

#### **Contact Information:**

For questions or comments, please contact <u>Transfusion.SafetyTeam@aplabs.ca</u> or refer to http://www.ahs.ca/labtransfusion.